

CLAIMS:

1. A method of the manufacture of an optical lens element, said method comprising:

a) providing a fixable liquid separated from a different fluid by a meniscus;

b) varying a curvature of the separating meniscus; and

5 c) fixing the shape of the first liquid when the curvature has a desired configuration.

2. A method according to claim 1, wherein the fixable liquid comprises a curable liquid.

10 3. A method according to claim 1 or 2, wherein the different fluid comprises a liquid.

4. A method according to claim 1, 2 or 3, wherein the fixable liquid is separated
15 from a first electrode by a fluid contact layer and the different fluid is acted upon by a second electrode, and the curvature is varied by varying an applied voltage across the first and second electrodes.

5. A method according to claim 4, wherein the first electrode forms at least part
20 of a substantially cylindrical configuration of electrodes.

6. A method according to claim 4, wherein the first electrode forms at least part of a non-cylindrical rotationally-symmetric configuration of electrodes.

25 7. A method according to any of the preceding claims, comprising fixing the shape of the fixable liquid when a surface of the fixable liquid lies in contact with a surface of a rigid substrate.

8. A method according to any of claims 1 to 6, wherein a further meniscus surface of the fixable liquid interfaces with a fluid material and the curvature of the further meniscus varies in configuration generally in accordance with the curvature of the first said meniscus.

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9. A method according to any of claims 1 to 6, comprising providing a further fluid, wherein a further meniscus is formed between the fixable fluid and a surface of the further fluid, and varying the curvature of the further meniscus independently of the variation in curvature of the first meniscus.

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10. A method according to claim 9, wherein a third fluid is acted upon by an electrode and wherein a curvature of the further meniscus is varied by the variation of an applied voltage at the electrode acting on the third fluid.

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11. A method according to claim 9 or 10, wherein the third fluid is a liquid.

12. A method according to any preceding claim, comprising providing a configuration of a plurality of electrodes and varying voltages applied thereto to form meniscus shapes.

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13. A method according to any of the preceding claims, wherein the fixable liquid is an insulating liquid and the different fluid is an electrically conducting liquid.

14. A method according to any preceding claims, comprising fixing the shape of the fixable liquid by the application of ultraviolet radiation.

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15. A method according to any of claims 1 to 13, comprising fixing the shape of the fixable liquid by heat curing or chemical curing.

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16. A method according to any preceding claim, wherein said manufacture of an optical lens element comprises the manufacture of ophthalmic lenses to correct a patient's eye deviation.

17. An optical lens element manufactured using the process of any preceding claim.

18. Apparatus for the manufacture of an optical lens element, said apparatus
5 including:

a) a receptacle for receiving a fixable insulating liquid and an electrically conducting fluid, said fluids separated from each other by a fluid meniscus;

b) an electrode configuration arranged to enable the curvature of the fluid meniscus to be varied; and

10 c) means for fixing the shape of the fixable liquid.

19. Apparatus according to claim 18, further comprising a rigid substrate, the substrate being adapted to removably interfit with the receptacle to allow a surface of the fixable liquid to lie in contact with a surface of the substrate when the liquid is fixed.

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20. Apparatus according to claim 18 or 19, wherein the fixing means comprises a source of ultraviolet light.

21. Apparatus according to any of claims 18 to 20, further comprising means for
20 repeatedly inserting measured amounts of the fixable liquid into the receptacle.